LeCours, Catherine

From: Mary Goldade [mary4pilates@hotmail.com]
Sent: Saturday, January 27, 2007 4:18 AM
To: LeCours, Catherine
Cc: hoogerheide.roger@epa.gov; peronard.paul@epa.gov; costanzi.frances@epa.gov; miller.aubrey@epa.gov; obrien.wendy@epa.gov; luey.jim@epa.gov; goldade.mary@epa.gov
Subject: TAPE comments

Follow Up Flag: Follow up
Flag Status: Blue

Attachments: Draft Final Troy SAP (4-14-06) (MG 1-26-07).doc; TAPE Review Comments (MG 1-26-07).doc


Draft Final Troy SAP (4-14-06)...


TAPE Review ɔmments (MG 1-26-

Catherine,
Please find attached my comments for the TAPE. Keeping your max file size in consideration I'm sending 2 of 3 files in this email. I'll send the 3rd separately.
Let's talk soon.
Thanks,
Mary

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wyncoop St.
DENVER, CO 80202
Phone 800-227-8917
http://www.epa.gov/region08

January 26, 2007

Ref: 8EPR-PS

To: Catherine LaCours
Montana Department of Environmental Quality

From: Mary Goldade, Senior Scientist Regional Superfund Chemist
Superfund Technical Assistance Unit, Region 8

Subject: Review Comments for the Draft Final Troy Asbestos Property Evaluation Work Plan

cc: Roger Hoogerheide, EPA Remedial Project Manager [RPM] (via email)
EPA Libby Team members (via email)

I have performed a review of the *Draft Final Troy Asbestos Property Evaluation Work Plan (Field Sampling Plan and Quality Assurance Project Plan) for the Troy Asbestos Property Evaluation Project* dated April 2006. Obviously a great deal of time and effort has been put forth in its development and most of the components necessary to implement the investigation is available. My technical review comments on items that require refinement and/or augmentation are provided below. Feel free to contact me if you have any questions or concerns. Thank you for the opportunity to review this document.

1. Text Change Recommendations/Comments. I did not spend time reworking language in the document, however, I noted a few areas in the first 13 pages for consideration. The edited file is located in Attachment A.
2. Target Analyte. Analytical methods will analyze LA, chrysotile and note other amphiboles, if present. Clarify in the document what target analytes will be tested, which minerals will be evaluated, and which minerals will be reported to the Troy property owners/residents. For example, Section 1.0 reads: "The TAPE Work Plan describes the field and property inspections and sample collection necessary to identify if and where asbestos is present within the Troy OU and the concentrations and quantity, if present."
3. Quality Control (QC) Criteria. Refer to QC samples rather than QA samples. Insert QC samples, frequency, and acceptance criteria provided in Attachment B.

and target analytical sensitivities, information about which "action level" will be used to determine which properties in Troy will be cleaned, must be included. Will an Action Level and Clearance Criteria document similar to the one developed for Libby (December 15, 2003) once data are generated from the TAPE? If so, describe that process to provide sufficient guidance about what analytical methods are necessary and to what analytical sensitivity samples should be analyzed in order to support cleanup decision. (For example, analytical sensitivity recommended for Libby CSS work: Dust = 500 s/cm2; PLM-VE = 0.2%). The bulletized list in this section is helpful for understanding the stepwise process in deciding where/when to sample, but a sentence should be added ahead of the list to explain its purpose. Further, organizationally, the list should precede the discussion about future cleanups.

e. Decision Errors. Bullet #2: reads "There are two types of decision error: false negative error, and false positive error. A false negative decision error occurs when the null hypothesis is rejected although it is true. The consequences of a false negative error would be that VCI or LA-contaminated dust or soil at a Troy property is not remediated. A false positive decision error occurs when the null hypothesis is not rejected although it is false. The consequences of a false positive error are that unnecessary resources are expended to undertake remedial action to address contaminated media that do not exist at concentrations that exceed action levels or acceptable risk levels." Because I am not clear about how clean up decisions play in the DQOs of this document, I cannot provide recommended textual changes. However, it is inappropriate to discuss decision errors on clean up decisions (and cite both action levels and risk levels) if they are not part of the project goals. Please clarify.

8. References to analytical methods must be updated (e.g., ASTM D5755-95 to D5755-03) or better, just reference the Analytical Methods compendium for Libby (Contact Anni Autio at CDM for the reference and a copy).
9. Interior Dust Composite Sampling. To reduce the amount of uncertainty about the dust sample, a larger sample size for each composite sample is necessary (i.e., more than 3 points). As such we need to revisit the sampling scheme for the dust sampling. At minimum, more points (more 100 cm2 templates) per composite sample must be collected—on the order of 10-30 points. Thirty is more likely to produce a representative sample, but may not be feasible, particularly if a co-located duplicate sample is also collected at the property. Let's discuss the practicality of 30-point composite dust samples in relation to high and low traffic samples. It may be that we will remove the distinction of these two types of dust samples. Add collection of co-located samples (i.e., "duplicates") at the same property.
10. Soil Composite Sampling. Soil sampling will require a 30-point composite sample for each area sampled. Additionally, focus on or special attention to "high traffic" areas in the exterior soil sampling scheme is not advisable. Investigations must take in to account potential future exposure in addition to current exposures. As such, a systematic sampling scheme (without bias) must be employed. Also, sampling and identification of

1.0 PROJECT DESCRIPTION AND BACKGROUND

Tetra Tech EM Inc. (Tetra Tech) received Task Order No. 41 from the Montana Department of Environmental Quality, Remediation Division (DEQ), under DEQ Contract No. 402014. The purpose of this task order is to complete a Troy Asbestos Property Evaluation (TAPE) Work Plan for the Troy Operable Unit (OU) of the Libby Asbestos Superfund Site. The United States Environmental Protection Agency (EPA) is the lead agency for the Libby Asbestos Superfund Site. DEQ is the lead agency for the Troy OU through a Cooperative Agreement with EPA. EPA requested DEQ lead the Troy OU for efficient resource allocation. The TAPE Work Plan describes the field and property inspections and sample collection necessary to identify if and where asbestos is present within the Troy OU and the concentrations and quantity, if present. This information will be used at a later date to support cleanup decisions.

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This TAPE Work Plan document is a combined field sampling plan and quality assurance project plan and is referred to as the TAPE Work Plan. Tables and figures in this document follow the first reference in the text. Appendix A contains the site-specific health and safety plan (HASP), Appendix B contains copies of project-applicable standard operating procedures (SOPs), Appendix C is a list of equipment and supplies required for the project, Appendix D contains samples of information for residents, and Appendix E contains example TAPE project field forms.

1.1 PROJECT BACKGROUND AND PURPOSE FOR SAMPLING

Troy, Montana, is located 18 miles northwest of Libby, Montana. From the 1920s until 1990, an active vermiculite mine and associated processing operations were located at Libby. While it was in operation, the vermiculite mine in Libby may have produced 80 percent of the world's supply of vermiculite (EPA 2005). Processed and exfoliated vermiculite has been used primarily for insulation in buildings and as a soil amendment. The vermiculite deposit is contaminated with a form of amphibole asbestos (Libby amphibole asbestos [LA]) that is considered a carcinogen. Asbestos is a known carcinogen and is associated with a multitude of respiratory health effects, including asbestosis, lung cancer, and mesothelioma. For decades, vermiculite ore and waste materials were ubiquitous in the Libby community while the mine operated and after its closure.

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In 1999, EPA Region 8 dispatched an emergency response team to investigate media reports that described a high rate of asbestos-related deaths in Libby. The Agency for Toxic Substances and Disease

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Registry (ATSDR) has since determined that between 1978 and 1998 asbestosis mortality in Libby was 40 times to 80 times higher than expected in Montana and the United States, and lung cancer mortality was approximately 20 percent to 30 percent higher than expected in Montana and the United States (ATSDR 2002). Originally believed to be a problem limited to the mine workers, the scope increased. Subsequent environmental investigations have found many areas in and around Libby contaminated with LA. EPA began Time Critical Removal Actions in Libby in 1999 through a two-phased approach. The Phase I investigation was used to determine if a time critical removal action was warranted in Libby to protect human health, to identify potential major source areas, and to identify the appropriate analytical methods for measuring concentrations of LA in those source materials (CDM 2002). The Phase II investigation was used to collect detailed information about airborne concentrations in air that result from sources of contamination that are disturbed (CDM 2003b). The combined results from the Phase I and II investigation include:

- Exposure to LA is a threat to human health.
- Release of respirable LA fibers occurs when source materials are disturbed.
- Source materials include vermiculite insulation, vermiculite products (building materials) and process wastes, and contaminated soils.
- Contaminated indoor dust found in residential and commercial properties is a potential exposure pathway.
- There is widespread presence of LA throughout the Libby area.

As a result of the findings from the Phase I and II investigations, and because the Libby Asbestos Superfund Site was listed on the National Priorities List in 2002, EPA further investigated residences and businesses in the Libby study area boundary (EPA 2003b). EPA began the Libby Asbestos Superfund Site Contaminant Screening Study, which was considered the first part of the Remedial Investigation, in 2002. The goal of the Contaminant Screening Study was (and is) to determine which properties in Libby contained LA source materials (CDM 2003a). As of December 2005, EPA and their contractors have investigated 4,029 properties in the Libby area through the Contaminant Screening Study.

The purpose of the TAPE is to characterize the nature and extent of LA source contamination present in the Troy site boundaries. The investigative approach is similar to that of the Contaminant Screening Study carried out in Libby, but makes improvements based on lessons learned from those activities. Limited investigations thus far have found the vermiculite insulation found in Troy is similar in both morphology and mineralogy to the LA found in Libby (USGS 2005). The draft Troy Site Conceptual Model (Section 1.2) illustrates that

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1.4 SCHEDULE

The schedule for the TAPE inspection and sampling field work is pending DEQ receiving adequate EPA funding. The TAPE field work may begin in the summer 2006 and would require approximately 75 full work-days to complete (15 weeks) based on an average of 15 total TAPE inspections per full day. The soil and dust samples collected from the TAPE field work will be prepared for analysis by CDM and analyzed for asbestos concentrations by a contract laboratory. Analysis of the samples is also dependent upon adequate EPA funding. Tetra Tech will prepare a TAPE Field Summary Report approximately 90 days after the completion of the field work. The draft TAPE project report would be submitted to the DEQ and others approximately 60 days after receiving the analytical data.

1.5 DOCUMENT ORGANIZATION

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This TAPE Work Plan is organized into eight sections. Section 1.0 is this introduction. The contents of Sections 2.0 through 8.0 are briefly described below.

- Section 2.0 Project Organization. This section identifies key project personnel and project responsibilities and provides an organizational chart and a table of participants with contact information.
- Section 3.0 Work Plan Rationale. This section describes the data quality objective (DQOs) steps used to establish the quantity and the quality of data to support decision making.
- Section 4.0 Field Procedures. This section describes the activities that will take place during the property evaluations. The SOPs for each activity and the HASP are referenced and detailed.
- Section 5.0 Field Quality Control Procedures: This section discusses the field quality assurance and quality control (QA/QC) procedures, including equipment decontamination, QC samples, field documentation, and chain of custody. Also discussed in this section are QA procedures used at the Libby Asbestos Superfund Site (EPA 2000c).

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- Section 6.0 Data Management. This section describes how the data will be handled after they have been received from the Libby V2 database.
- Section 7.0 QA/QC Procedures. This section will describe the procedures that will be taken to ensure the quality and integrity of the TAPE data.

Finally, references used in preparing this document are presented in Section 8.0.

2.0 PROJECT ORGANIZATION

Table 2-1 presents the responsibilities and contact information for key personnel involved in the TAPE inspection and sampling project. In some cases, more than one responsibility has been assigned to a person.

The John A. Volpe National Transportation Systems Center (Volpe Center) is providing support to EPA Region VIII, including management of the Libby V2 database which is used to store sampling, analytical, and other pertinent data from the Libby Asbestos Superfund Site. Tetra Tech will transfer Troy data to and obtain data from EPA and their contractors. Tetra Tech will transfer custody of all soil and dust samples to CDM after the samples have been recorded and organized. CDM will then be responsible for custody and quality assurance of the samples until delivery to a contract laboratory for analysis. CDM contracts all analytical laboratories used for the Libby Asbestos Superfund Site. Therefore, CDM will oversee laboratory schedules and track data deliverables.

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2.1 MONTANA DEQ OVERSIGHT

The DEQ Project Officer (or designee) will provide oversight of all field activities associated with this TAPE project. DEQ oversight personnel will have the ability to inspect all field and sampling activities, determine the appropriateness of the recorded data, and ensure that all activities comply with standard practices that meet the project objectives. Before any oversight is conducted, the Tetra Tech on-site health and safety coordinator will brief the DEQ oversight personnel to ensure safe practices are maintained throughout the TAPE field effort.

2.2 NON-AGENCY OBSERVATION OF FIELD ACTIVITIES

EPA will be allowed the opportunity to observe the TAPE project field activities. The request for non-Agency observation of field activities must first be coordinated with and approved by the DEQ Project Officer and the individual property owner. When inspection and sampling are being conducted on a Troy property and the owners are present, the property owners will have the opportunity to (1) observe Tetra Tech field inspection and sampling in a safe manner, (2) obtain copies of the field forms and property sketches completed for the property, (3) obtain a receipt for samples collected, and (4) obtain a portion of samples collected (at the cost of the property owner). The Tetra Tech field team will brief property owners about the types of sampling and methods for completing the TAPE inspection and sampling;

3.0 TROY DATA QUALITY OBJECTIVES

This section presents the DQOs for the TAPE inspection and sampling project. The DQOs are qualitative and quantitative statements developed through the seven-step DQO process (EPA 2000a, 2000b). The DQOs help to clarify the study objectives, define the most appropriate data to collect and the conditions under which to collect the data, and specify tolerable limits on decision errors that will be used as the basis for establishing the quantity and quality of data needed to support decision-making. The DQOs are used to develop a scientific and resource-effective design for data collection. The seven steps of the DQO process for this TAPE project are presented in Table 3-1.

Background information for the Troy OU study area was discussed in Section 1.0 as was a draft Site Conceptual Model (Figure 1-1). Because vermiculite, stoner rock, and other LA-contaminated wastes were transported from the mine to Troy properties at irregular and unpredictable intervals, sources of LA contamination may be found are not predictable; DEQ has therefore determined that each property in the Troy OU (including privately-owned and publicly-owned property) will be investigated and screened. The properties may or may not contain a building, or multiple buildings; specific use areas (gardens, former gardens, flower beds, gravel and dirt driveways, and play areas; all are areas with potentially greater exposure or greater use of vermiculite amendments); and yards and open space.

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The DQOs will be used to design the TAPE project so that the sampling and analysis are appropriate to provide information to EPA regarding the properties with vermiculite-containing insulation (VCI) and other potential sources of LA contamination (vermiculite, building materials, or soil) within the Troy OU.